FE142 WIRE DRAG

Diagram No. 1000-3 & 1001-3

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

(HYDROGRAPHIC)

Type of Survey ... Wire Drag Field No. PBS-4355WD Office No. FE-142 LOCALITY North Carolina General Locality Atlantic Ocean, Cape Hatteras Area LocalityOff. Ocracoke Inlet 1955

CHIEF OF PARTY J.C. Mathisson

LIBRARY & ARCHIVES

DATE January 16, 1957

☆ U.S. GOV. PRINTING OFFICE: 1976-669-441

NOTE: A new system for registering Field Examinations (FE's) was established in 1980. All FE's are now consecutively numbered as shown hereon. The adte shown in the new format is the actual date of survey. This material was previously registered as;

FE No.1 1957

FE No.1 1957 WIRE DRAG

FE - 142

Diag. Cht. Nos. 1000-3 and 1001-3

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE,

DESCRIPTIVE REPORT

Type of Survey WIRE DRAG WRECK INVESTIGATION .

Field No PBS-4355WD Office No.F.E.NO.1-195
Wire Drag

.....

LOCALITY

State NORTH CAROLINA

General locality ATLANTIC OCEAN, CAPE

HATTERAS AREA

Locality OFF OCRACOKE INLET

19# 55

CHIEF OF PARTY

JOHN C. MATHISSON

LIBRARY & ARCHIVES

JAN 1 6 1957

DATE

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DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. F.E. No. 1-1957 WD

Field No. PBS-4355WD

State	NORTHGCAROLINA	
General locality	ATLANTIC OCEAN	
Locality	OFF OCRACOKE INLET	
Scale 1:40,000	Date of survey 27 July to 4 Aug. 195	5
Instructions dated28	January 1955	1.
Vessel PARKEF	R, BOWEN & STIRNI	
Chief of party	JOHN C. MATHISSON	•
	ATHISSON, H.J. SEABORG, C.R. REED, D.B. RUSHFO EL & J.R. PLAGMIER Kar, graphic recorder, hankenakunkak	RI
Fathograms scaled by	FIELD PERSONNEL	
Fathograms checked by	FIELD PERSONNEL	
Protracted by DRAG STRIPS INKED B Soundings penciled by	FIELD PERSONNEL BY HUGH L. PROFFITT	
Soundings in KANASAS 1	feet at MLW MKKWX	
REMARKS:		
	•	
·····		

Field Notes for Descriptive Reports to Accompany 1955
Wire Drag and Hydrographic Sheets - Ships PARKER, BOMEN, STIRKI Cdr. John C. Mathisson, Chief of Party PB5 4355

A. FROJECT - Original instructions for Project No. CS-377 addressed to the Commanding Officer of the Ships PARKER, BOWEN, and STIRMI are dated 28 January 1955. Froject number was later changed to 1377.

B. SURVEY LIMITS AND DATES - The following sheets are included in the 1955 seasons work of the Ships PARKER, BOKEN, and STIRMI.

(a.) Hydrography and Wire Drag: PBS2255 (H-8247) Cape Lookout Shoals - North End

PBS 2355 (H-8248) Cape Lookout Shoals - South End

- (b.) Hydrography: PBS 2455 (H-8249) Diamond Shoals
- PBS-4155 W.D. South of Cape Lookout, N. C.

 PBS-4255 W.D. Enst of Cape Lookout, N. C.

 PBS-4355 W.D. Off Ocracoke Inlet, N.C.

 PBS-4455 W.D. Cape Hatters, N.C.

 PBS-4555 W.D. Northeast of Cape Hatters, N.C.

 PBS-4655 W.D. Cifshore East of Cape Fear, N.C.

 PBS-4755 W.D. Inshore East of Cape Fear, N.C.
- (d.) Reconnaissance Hydrography: PBS-4855 Offshore Southeast of Cape Lookout, N.C.

No work was accomplished on sheet PBS-2155 V.D. - Northwest of Cape Henry, Virginia.

A special hydrographic investigation was made in Core Sound, north of Coracoke Inlet. It is the subject of a special report previously submitted.

A special wire drag investigation was made in the Pasquotank River, Virginia. This is also the subject of a special report already forwarded.

Plotting of the wire drag boat sheets was not completed in the field.
Shoalest hangs and deepest clearances on wrecks will have to be determined after plotting has been completed. Wreck letters submitted during the field season give preliminary values based on predicted tides and approximate lifts.

A comparison of boat sheet depths with charted depths in the case of hydrographic sheets serves no useful purpose at this time. The comparison should be made after the completion of the smooth sheets.

SHORAN CORRECTIONS!

The shoran equipment in all three vessels was calibrated at frequent intervals during the season. Three "Dinoplex" calibration sheets were used. One each in the vicinities of Cape Hatteras, Cape Lookout, and Cape Fear. Calibrations were taken each time the shoran stations were moved and at other intervals when thought necessary.

Once a shoran correction was determined, this correction was applied to all shoran readings until a new calibration was taken. The new connection was then applied to all subsequent shoran readings. Zero checks were made at the time of each calibration and at frequent intervals while using shoran control. No abnormal deviation from the zero set was found.

A tabulation of the shoran corrections used for the through ships follows: Shoran corrections were rounded off to the nearest 0.005 mile when entering corrections in volumes.

Tabulation of Shoran Calibrations - STIRNI:

Date	Recorded in Vol. Sheet No.	Monitor No.	Sta. 36	Corr'n	Sta. 37	Corr'n
4-26-55	2255	1	SAM	-0.021	KNOL	/ 0.012
5-9-55	8155	ī	SAM	≠0.001	KNOL	70.010
5-25-55	8155	ī	SAM	<i>4</i> 0.002	KNOL	-0.009
6-3-55	4455	1	CLUB	40.007	PEA	-0.045
6-6-55	4455	2	CLUB	≠ 0.00 8	PEA	-0.016
7-22-55	2455	2	CLUB	70.061 (r)	PEA	≠0.021 (±)
7-29-55	4355		CLUB	-0.031	LOLA	-0.021 (F)
8-31-55	4255	2 2	SAM	70.004	LOLA	
9-26-55	4155	2	DEY	-0.040	KNOL	-0.019
10-20-55	4755	2	SURF	-0.008	OAK	-0.030 -0.034
		PARKER:				
4-18-55	2355 `	12	SAV	-0:003 -0:016	KNOL	-0:026 -0:008
4-27-55	2355	ĩ	SAM	-0.009	KNOL	-0.011
5-25-55	4155	ī	SAM	-0.008	KNOL	-0.016
5-31-55	2455	ī	CLUB	-0.020	PEA	
6-6-55	4555	2	CLUB	-0.001	PEA	-0.055
7-22-55	4455	2	CLUB	-0.023	PEA	-0.032
7-28-55	4455	2	CLUB	-0.004	LOLA	-0.032
8-31-55	4255	2	SAM	-0.001	LOLA	-0.034
9-28-55	4155	2	DEY	-0.015	KNOL	-0.042
10-18-55	4755	2 2	SURF	-0.061	OAK	-0.043
	7,77	* -	OOM.	-0.00T	OHA	-0.022

Tabulation of Shoran Corrections Entered in Volumes - STIRNI:

	Sta. 36	Sta. 37
Begin season thru 5-8-55 5-9-55 - 6-1-55 6-2-55 - 6-5-55 6-6-55 - 7-28-55 7-29-55 - 8-5-55 8-6-55 - 9-25-55 9-26-55 - 10-5-55 10-6-55 - Season End	-0.020 (SAM) (Set #1) 0.000 (SAM) " #0.005(CLUB) " #0.010 (CLUB) \$ -0.030 (CLUB) " #0.005 (SAM) " -0.040 (DEY) " -0.010 (SURF) "	#0.010 (KNOL) (Set #1) #0.010 (KNOL) # -0.045(PEA) # -0.015 (PEA) Set#2- -0.030 (LOLA) # -0.020 (LOLA) # -0.030 (KNOL) # -0.035 (OAK) #
4-18-55 0900 - 1130 1401 - 1520 1520 - 1650 1650 - end	PARKER: -0.005 (SAM)(Set #1) -0.015 (SAM)(Set #2) -0.005 (SAM)(Set #1) -0.015 (SAM)(Set #2)	-0.015(KNOL) (SET #1) -0.010 (KNOL)(Set #2) -0.015 (KNOL)(Set #1) -0.010 (KNOL) (Set #2)
4-19-55 - 5-2-55 at 10:55 5-2-55 1055-1115 1115-end 4-19-55 - 1600 4-26-55	-0.005 (SAM) (Set #1) -0.015 (SAM) (Set #2) -0.005 (SAM) (Set #1)	
4-26-55 1600 - 1650 1650 - End		-0.015 (KNOL (Set #1) -0.010 (KNOL)(Set #2) -0.015 (KNOL)(Set #1)

Settlement and Squat Corrections:

The settlment and squat corrections were the same as used in previous years for all three ships. The correction depending upon the speed and the water depth. Tabulation of corrections follows:

(Next Page)

SETTLEMENT & SQUAT CORRECTIONS (ALL /)

PBS

SPEED (RPM)	CORRECTION (FEET)	FROM DEPTH TO DEPTH (FEET)
400	0.2	all depths
450	0.2	all depths
500	0.2	all depths
600	0.4 0.2	6.0 to 14.5 15.0 and over
650	0.4	11.5 to 17.0 17.5 and over
700 .	0.6 0.4 0.2	12.5 to 15.0 15.5 to 19.5 20.0 and over
750	0.8 0.6 0.4 0.2 0.4	12.5 to 14.0 14.5 to 16.5 17.0 to 21.5 22.0 to 31.5 32.0 and over
800	1.0 0.8 0.6 0.4	12.5 to 13.0 13.5 to 15.5 16.0 to 19.0 19.5 and over
850	1.0 0.8 0.6 0.4	12.5 to 13.5 14.0 to 16.5 17.0 to 22.5 23.0 and over
900	1.0 0.8 0.6 0.4	12.5 to 14.5 15.0 to 20.5 21.0 to 34.0 34.5 and over
1000	1.0 0.8 0.6	6.0 to 21.5 22.0 to 31.5 32.0 and over

TIDES:

Final tides were either furnished by the Washington Office for the periods needed, or were tabulated in the field from observed tides.

Tide reducers for the Cape Hatteras Area were based on tide v staff readings for Hatteras Inlet (Outside).

Tide reducers for the Cape Lookout Area were based on the portable gage installed at Lookout Bight.

Tide reducers for the Cape Fear Area were interplated by the $\ensuremath{\!\!\!\!/}$ Washington Office, Division of Tides and Currents.

All tide reducers were referred to the plane of mean low water.

On the hydrographic surveys, tide reducers were entered to 0.2 ft. \circ On the wire drag surveys, tide reducers were intered to 0.5 feet.

ECHO CORRECTIONS:

The echo corrections for all three ships were determined by bar checks at intervals during the season. Standard methods were used and the leadlines on the bars were checked and found to be the correct length so no correction was necessary to leadline lengths.

Bar checks were not taken as often as would be expected for a hydrographic party due to the nature of operations and lack of suitable weather along the open coast. However, sufficient tests were made to provide accurate corrections for the various fathometers and scales.

The Edo fathometer on the STIRNI was not used for hydrographic work, but was tested and separate reports submitted to the Washington Office on 30 September 1955 and 20 June 1956.

On the BOWEN and STIRNI fathometers No. 160SPX, 100S and 161SPX the corrections on the A scale varied with the depths and were so entered. On the PARKER fathometer No. 1175, the A scale corrections were uniform regardless of depth so one correction for the entire A scale was determined and used. On the B, C, and D scales of all fathometers, a single correction was determined for each scale.

On the PARKER, fathometer No. 1175 no D scale correction could be determined as no return could be gotten from the bar at that depth in D scale. On the PARKER, the D scale was used only for a few soundings during the following periods:

6 June 1955 Sheet PRS-4455 Vol. I Position 8 on B day 12 July 1955 Sheet PBS-4455 Vol. II Pos. 46 to 49 on D day 12 July 1955 Sheet PBS-4455 Vol. II Pos. 57 to 62 on D day On 11 June 1956, a bar check was obtained under ideal conditions and one check on the D scale at 110 feet was obtained. The correction was -2.0 feet. It is suggested that this correction be used in the above few positions. These positions had no correction entered in the Volumes at the time the volumes were transferred to the Norfolk District Office.

A tabulation of the corrections applied to the fathometer soundings follows:

A. PARKER Fath. No. 1175 Type 808 A scale -0.2 feet B scale -0.6 feet C scale -0.2 feet D scale See Report* B. BOYEN Fath. No. 160SPX Type 808 A scale -0.2 feet. 0 to 16.9 ft. 0.0 ft. to 27.2 ft. ≠0.2 ft. to 33.8 ft. 10.4 ft. to 39.4 ft. 10.6 st. to 45.2 ft. ≠0.8 ft. to 50.9 ft. 1.0 ft. to 55.0 ft. B Scale 1.5 ft. to 57.8 ft. 12.0 ft. to 90.0 ft. C Scale #2.5 ft. D Scale #2.5 ft. Fath No. 1005 Type 808 A Scale 0.0 ft. to 22.0 ft. 40.2 st. to 35.5 ft. 10.4 ft. to 48.9 ft. 40.6 ft. to 55.0 ft. B Scale #1.0 C Scale #1.5 C. STIRNI Fath. No. 161 SPX Type 808 A Scale 0.0 ft. 0 to 13.5 ft. to 24.0 ft. ≠0.2 ft. 10.4 st. to 33.0 ft. 40.6 ft. to 42.5 ft.

≠0.8 ft.

1.0 ft.

0.0 R.

-2.5 ft.

-4.5 ft.

B Scale

C Scale

D Scale

to 49.0 ft.

to 55.0 ft.

WRECK CLEARANCES

WRECK NO.	LAT.	LONG.	MINIMUM HANG	MAXIMUM CLEAR
447	34-59.381	75-48.16	57'	541 actual sdg 54ft.
448	34 - 59.60	75-45.75	709 Trance 6	lanced say 63 ft V
449	34 - 53•96	75-45.02		Samuel II - 11 X
450		75-54.20°		681 Sounding 71 v
1,006.	of the dr	assed area	See position	27B (blue).
641	34-45.81	75-47.02	921	89's actual sdq. 97ft.

ADDENDUM To_Accompany

WIRE DRAG SURVEY PBS-4355WD

GENERAL

All surveys for the 1955 season were reclieved at the Processing Office /with only the positions for "N" buoy plotted on the Guide Launch sheet and the positions for "F" buoy plotted on the End Launch sheet. The positions for "F" were transferred to the Guide Launch sheet and all drag strips were inked and effective depths plotted according to drag strips in the volumes. Field plotting was accepted in all instances except for the final positions of each wreck.

Only those drag lines showing minimum hangs and those showing maximum clearances were plotted on the sheet. The other drag lines and their effective depths were listed at each wreck.

Respectfully submitted,

Hugh L. Proffitt Cartographer.

Norfolk, Va. 11 Jan. 1957

U. S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens:

7 February 1957

Plane of reference approved in 4 volumes of sounding records for

HYDROGRAPHIC SHEET FE NO 1 1957

Locality Cape Hatteras, North Carolina

Chief of Party: J. C. Mathisson in 1955

Plane of reference is mean low water, reading

2.0ft. on tide staff at Hatteras Inlet

7.6 ft. below B.M. 1 (1955)

Height of mean high water above plane of reference is 3.4 feet.

Condition of records satisfactory except as noted below:

Chief, Tides Branch

Dellon

Comm-DC 34330

	GEOGRAPHIC NAMES Survey No. F.E.No. (1957)	. 1		Son C.	D D D D D D D D D D D D D D D D D D D	Se local ton	Dr. Oca Mada	Ocuide of	Nog Not	7. Sight	<i>§ /</i>
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Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. F.E.No.1-1957 W.D.

Records accompanying survey:		
Boat sheets; sounding vols?; w	ire drag	y vols2;
bomb vols; graphic recorder rolls	l-Envel	op e
special reports, etc!-Descriptive repor	t and 1	Smooth sheet.
••••••••••••	• • • • • •	• • • • • • • • • • • • • • • • • • • •
The following statistics will be submitted wirepher's report on the sheet:	th the c	eartog-
Number of positions on sheet		131 WD
Number of positions checked		22.
Number of positions revised		/.
Number of soundings revised (refers to depth only)		/.
Number of soundings erroneously spaced		
Number of signals erroneously plotted or transferred		
Topographic details	Time	0
Junctions	Time	
Verification of soundings from graphic record	Time	2
Verification by Seskind	16.	Date 7-956
Reviewed by Time	4	Date 7-8-56

In compliance with the original instructions dated 28 January 1955, this field examination was made to locate and determine the least depths over

Wreck	Ship
447	R. W. Abrams
- 448	Keshena
449	Dixie Arrow
450	Proteus
- 6lf1	Name unknown

which were sunk in the Atlantic Ocean in the vicinity of Ocracoke Inlet, off the coast of North Carolina.

All wrecks were found. Wrecks Nos. 447, 448, and 641 were hung by wire drags. Wrecks 449 and 450 were not hung by the wire drag. However, least depths on the wrecks and maximum clearances of the wire drags over the wrecks were obtained

The results of the wire-drag examinations are tabulated on the wreck clearance sheet in the Descriptive Report and are plotted on the attached 4 sections of the smooth sheet.

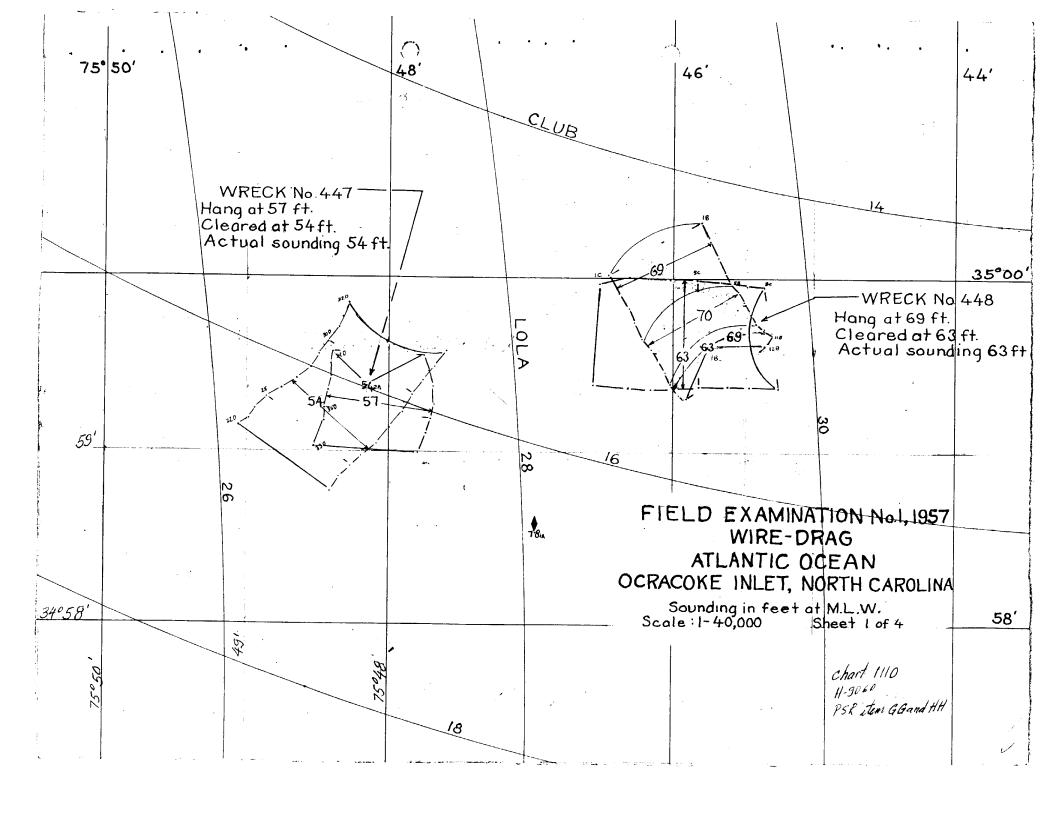
The work was applied to Chart 1110, dated April 22, 1957, prior to verification and review; the charted information is correct.

The Descriptive Report adequately covers all other matters pertaining to this examination. No further discussion is considered necessary.

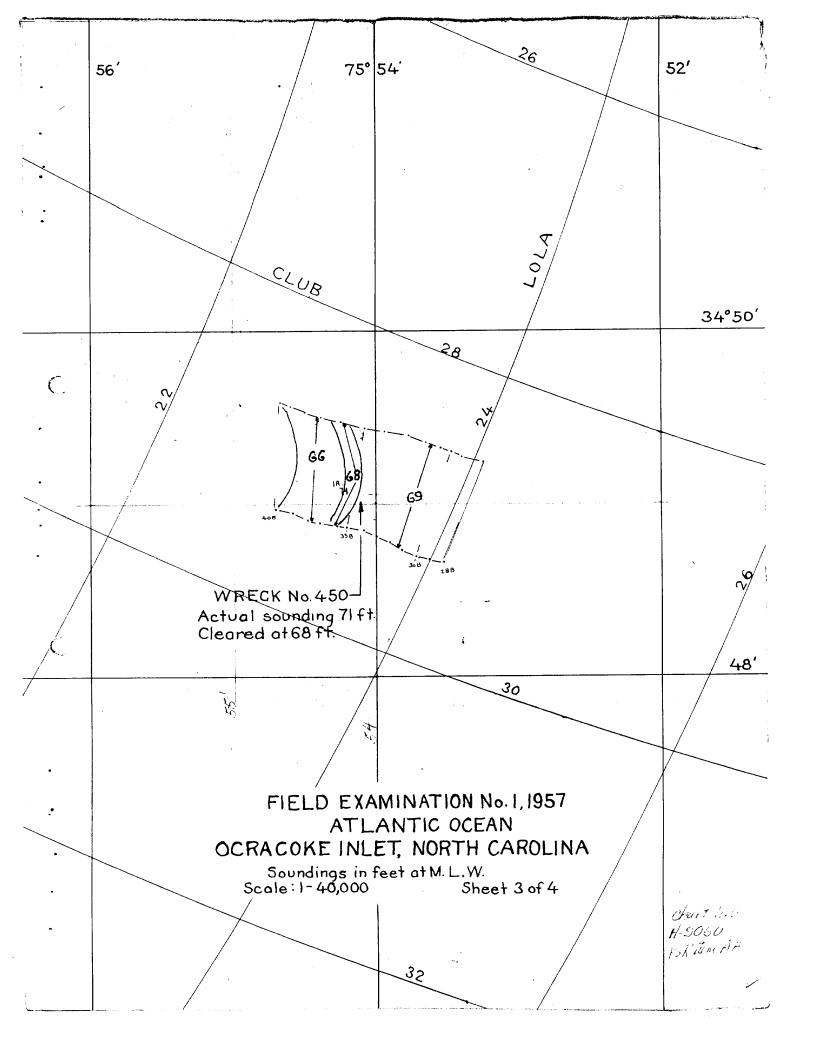
I. M. Zeskind 8 July 1957

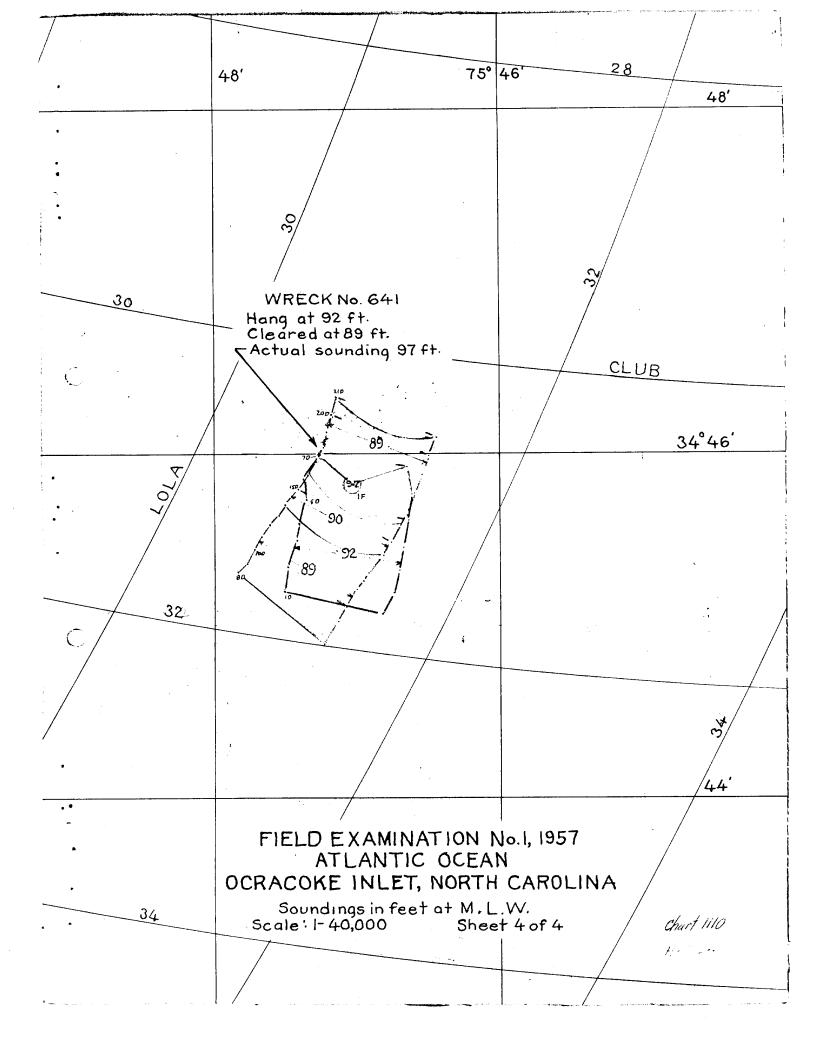
Inspected by - R. H. Carstens

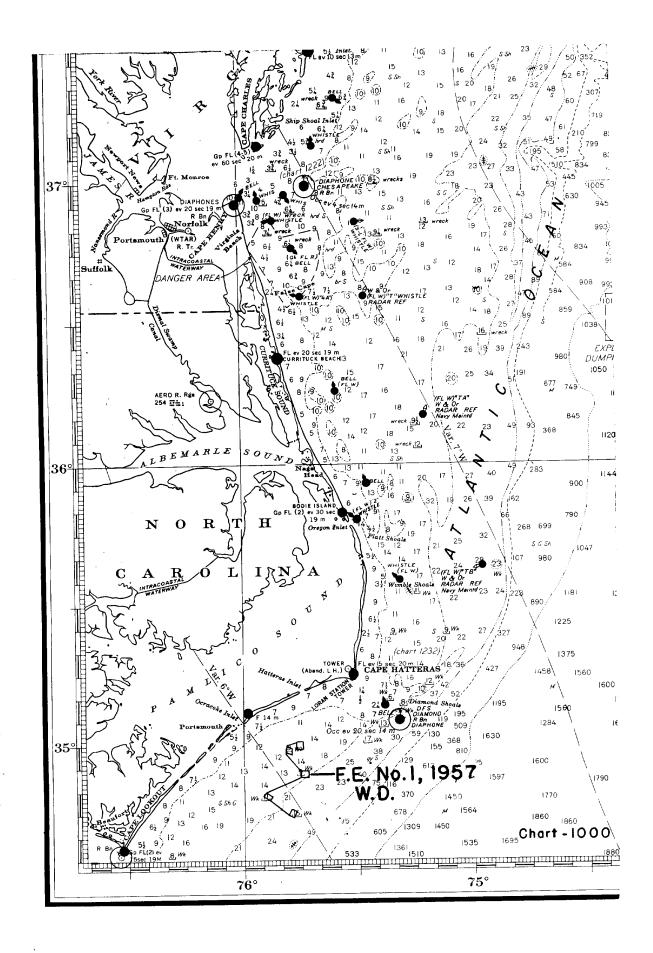
Reconnaissance hydrography in the vicinities of WKS 447 and 448 is plotted on tracing paper and is filed with the fathograms for F.E. 1, 1957. IMZ



	;	46'	75°	44'	
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	,	CLUB		20	
28		WREC	K No. 449	20	
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		FIELI	D EXAMINATION WIRE-DRAG	N No 1, 1957	
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		John	/ 40,000	Sheet 2014	
•		30			
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NAUTICAL CHARTS BRANCH

SURVEY NO. F.E.No.1-1957 W.D.

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
2/5/57	1001	The alber	Before Verification and Review
		8	Completely - no correction
	!		Before After Verification and Review
3/14/57	1/10	89 Millann	Before After Verification and Review
			no correction.
4/30/57	1000	N. W Burgayne	Before After Verification and Review Applied
9/30/60	1001	m. H. Macc	After Verification and Review No correction Fully applied
3/5/68	1000	Svendsen	Before After Verification and Review No corr Filly app.
-			Before After Verification and Review
		·	Before After Verification and Review
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M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.